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ABSTRACT

A five-step method for evaluating proposed policies for educational reform is suggested and explicated in this booklet. The five steps are as follows: (1) to identify the problems toward which reforms are directed, (2) to identify the policies designed to address each problem, (3) to identify assumptions about the problems and the proposed solutions, (4) to review what is known about the problems and proposed policies, and (5) to identify other ways of looking at the problems and policies. The booklet illustrates the application of the five-step method by showing how it can be used to review school reform in general as well as more specific reform policies aimed at student testing, salary structures, and administrative training programs. The five-step method is advocated as one aspect of a larger policy analysis process that could involve development of a policy analysis group with a carefully selected chairperson, research to obtain all relevant information, and adaptation of the five-step method to local needs. Among the issues policymakers will be facing in the near future are parental choice, the uses of electronic technology, the provision of educational services for dropouts and preschool children, and the relationship between education and economic development. A list of 29 references is appended. (PGD)

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SCHOOL REFORM POLICY: A CALL FOR REASON

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A Report from the ASCD Panel on State Policy Initiatives

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September 1986

Association for Supervision and Curriculum Development
Alexandria, Virginia

SCHOOL REFORM POLICY:
A CALL FOR REASON

A Report from the ASCD Panel
on State Policy Initiatives

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This report does not necessarily reflect the official positions of the organizations represented by the panel members.

Introduction

AMID THE VARIETY OF SCHOOL REFORMS SUGGESTED BY COMMISSION REPORTS, A dizzying number of policies have emerged. All are designed to address problems in American education. All have been shaped by widely differing points of view.

The stresses of implementation have given rise to debates about just which solutions address just which problems and just whose interests are served by the reforms. Is the proper role of policy to mandate or to assist school improvement? How can we make the reforms work? How can we best express our own views in the next round?

Whatever the debates, policymakers are under pressure to act; whatever the tensions, practitioners must implement policies. Amid the confusion of radical change, we struggle to sharpen our understanding of the reforms. Our purpose here is to provide a method of policy analysis so that readers can better evaluate policies of interest to them. We have constructed a framework of reason to help make sense out of change.

The Five-Step Method of Policy Analysis

As we worked together to evaluate reforms, the ASCD Panel on State Policy Initiatives generated and tested a five-step process.

Step One. Identify the problem(s) to which policies are directed. Policies are in fact *solutions* to problems. Therefore, we must clearly define the problems before we can tell whether the policy is successful or beneficial. Of course, the problems are not simple; but the way we define them is critical because how a problem is conceptu. ized has everything to do with the solutions that are suggested. Without a clear definition of the problem, policymakers are not likely to produce promising solutions, and the "solution" may actually make the problem worse.

Step Two. Identify the policy designed to address the problem. In other words, what policy are we talking about? As we narrow our view from general dismay to a specific problem and then from numerous proposals to a specific policy solution, we should see the connection between problem and solution.

For several reasons, policy statements often make this connection obscure. Policymakers simplify difficult issues and concentrate on symbolic meaning to capture the support of a large constituency. This effort to

simplify things may make them simplistic. The abstract terminology in which policies are typically written also leads to confusion. In addition, as compromises are made, clarity may be lost. Nevertheless, the connection between problem and solution must be established before analysis. If this link is fuzzy or tenuous, the policy has a fundamental weakness.

Step Three. Identify assumptions about the problem and the solution. If, for example, observers lament a decline in test scores, what assumptions do they hold about student achievement and the measurement of school success? If they prescribe increased graduation requirements and increased student testing to remedy the problems, what assumptions underlie those policy solutions? Just as we looked for connections between problem and solution in Step Two, we are now looking for connections with the underlying assumptions.

It is day-to-day school practice, of course, not a policymaker's assumptions about it, that determines whether any particular reform works. Thus it is crucial, in evaluating a policy, to know whether the assumptions that underlie it accurately reflect the realities of the educational system. One problem is that the assumptions embedded in any policy are not necessarily those of the policymakers who created the policy; the final wording of a policy may be the result of compromises that were necessary to get the policy adopted—compromises that may have nothing to do with the policy itself.

Step Four. Review what we know about the specific problem and the specific policy solution under study. We must examine policy responses against what we know about the specific problem and the policy solution under study. This kind of examination enables us to assess the appropriateness of the response. The knowledge that we can bring to bear upon policy analysis comes from the usual sources: practical experience, research findings, and the observations and judgments of scholars. As we list what we know, we are appraising the policy solution with realism and reason.

Step Five. Identify other ways of looking at the issue, both problem and solution. The final step in understanding policy involves returning to the original problem with a broadened conception of how to approach it. Once we have defined the problem, examined the solution, assessed the assumptions, and reviewed our knowledge, we can reassess the problem. In the light of the knowledge base, are the assumptions correct? Is the policy likely to solve the problem or take steps toward a solution, or will it create new problems? Will it have unexpected side effects?

Often the knowledge base about how certain policies work may not be sufficient to produce conclusive answers to these questions. However, this

method of analysis alerts us to be realistic about our expectations for a policy's success. As we identify omissions, unwarranted assumptions, or unbalanced approaches, we can see which policies are likely to fail, which may need amendment, and which are likely to succeed.

In the event that this critical examination of policy points out contradictions between the policy's assumptions and what we know, we must then ask if there are other, more appropriate ways to address the problem. Are there other ways of thinking about solutions that have a greater chance of solving the problem?

In the succeeding pages, we will illustrate the five-step method of policy analysis, first, in a discussion of general school reform, and then, in application to three specific types of policies. To conclude, we will list issues that are now attracting attention. We hope to prepare our readers to influence policymaking in the next wave of reform.

General School Reform

Step One. What Are The Problems?

School reform is not new; we have had waves of reform every decade for many decades. The policy pendulum has swung from an emphasis on subject matter to a focus on students' well-being in response to social and political forces. In the late '70s and early '80s, certain factors crept up slowly and burst upon the scene with intensity:

- Scholastic Aptitude Test scores and secondary school achievement in higher-order skills were steadily declining.
- Student behavior and attitudes, ranging from lack of motivation to large numbers of drop-outs, became a serious issue.
- Teacher quality was said to be declining, based on the lower SAT scores of new entrants into teaching.
- Global economic conditions challenged United States supremacy. Competition from Japan, for example, called into question basic industries and intensified demands for teaching more mathematics and science.
- Looming teacher shortages, particularly in math and science, threaten to further erode our school achievement and technological supremacy. Some states like California are predicting massive teacher shortages in the next decade as a large proportion of teachers retire and fewer people enter the profession.
- Only about 10 percent of families are "traditional"; the number of single parents and working mothers has increased dramatically.

- "Gray power"—the political clout of an aging population without children in school—altered politicians' appeals to their constituencies.
- In the wake of widespread taxpayer revolt, states faced heavy demands for accountability for the use of public funds.
- Conservative political and religious groups pressed for their own priorities in the schools as they acquired media sophistication and substantial resources.

In 1983, reform took center stage. Through commissions and task forces, national leaders released reports pressing for sweeping reforms. All called for educational excellence, all challenged the status quo. In addition, Boyer (1983), Goodlad (1984), and Sizer (1984) prescribed far-reaching structural and organizational reforms in schools.

Step Two. What Are The Policies?

For the first time in a reform movement, state legislators were heavily involved in legislating school improvement—new curriculums, new tests, new expectations for schools—and even in reorganizing the teaching profession. Every one of these initiatives increased the education budget at the state level. Almost all states proposed continued increases in education spending, and virtually all tackled at least three of the following substantive areas:

- Teacher certification and training, including entrance and exit testing, scholarships, and loan programs.
- Teacher compensation and career structure, including base salary increases, career ladder plans, and other incentive programs.
- Finance and governance, including funding formula revisions and changes in governance structures at the state, local, and intermediate levels.
- School calendar, attendance, and class size, including longer instructional days and years, revisions in compulsory school age and attendance policies, and efforts to lower pupil-teacher ratios.
- Graduation standards, including new course requirements and exit testing policies.
- Curriculum development in computer instruction and school-based improvement projects, especially extensive and highly prescriptive basic skills programs in every content area at all grade levels.
- Testing programs, including widespread assessments of student achievement, both norm- and criterion-referenced tests, proficiency exams, and early childhood screening programs.

Once we list the now-familiar problems and policy solutions, we must look behind their surfaces. What lies behind both? Can we make sense of the welter of changes with a framework of reason?

Step Three. What Assumptions Are Embedded in the Policies?

If school reform is to capture the top of a state's political agenda, two sets of assumptions must be made. First, assumptions have to be made about *the source, the magnitude, and the nature of problems* interfering with effective school performance. These assumptions create political pressure for reform, making education a "hot topic" relative to prisons, highways, criminal justice, or social welfare. Second, a believable set of assumptions must be made about *how these problems can be solved* through governmental action. Assumptions about solutions make it possible to develop concrete reform proposals and to sustain programs of action.

The First Set: Assumptions About Problems

Four quite different kinds of assumptions about what is wrong with the schools lie behind most recent reforms. Two of them emphasize problems within the schools; the other two are rooted in beliefs about conditions in the larger society.

Problem Assumption 1: School Productivity Decline. Intense demands for improvement have been made by observers who believe there has been a widespread decline in student achievement. The Commission on Excellence articulated this view in the shrillest possible terms when it proclaimed that the nation had committed an act of "unthinking unilateral educational disarmament." This sort of sensationalism grabs attention, urging immediate action to restore the integrity of the public schools. However, this view may be substantially in error. To be sure, Scholastic Aptitude Test (SAT) scores for college-bound students have declined measurably, but other students have steadily improved in test performance. And identifiable gains in some academic areas offset declines in others.

Efforts to deal with test score issues have grown more complex in the last several years. The question is no longer whether or how much test scores have actually declined. The great variations found to exist across schools and districts reveal unmistakable inequities in the quality of schooling. Reformers who thought the whole education system was sliding into mediocrity are now convinced that the high performance found in some schools can and should be required of them all.

Problem Assumption 2: Inadequate Resources. Many policies are based on the assumption that great improvements in school performance are possible, but inadequate resources and serious shortages of qualified personnel keep them from being realized. Real declines in teacher salaries have been documented. Growing shortages are apparent in a number of fields. Fewer young people are expressing an interest in entering the teacher workforce.

These personnel problems are complicated by serious deficiencies in facilities. Buildings are not located where students are. In many urban districts buildings are in serious need of maintenance and repair. Also, in many parts of the country, there is a shortage of facilities for laboratory sciences and vocational courses. These factors have led a number of policymakers to strive for political support for increased school budgets.

Problem Assumption 3: Weakness in the National Economy. Many reforms reflect the assumption that quality education is a key element in the development of a stable national economy, which in turn is a critical factor in our national security. American productivity has become a political issue, and education is seen as a major factor in improving productivity. Technology has transformed manufacturing work into essentially unskilled labor, and these jobs have been moving to cheap labor pools outside the United States. Thus, it has become increasingly important to prepare every child to become a skilled worker. Furthermore, the skills required are not just technical. In our high-tech, service-oriented economy, workers need intellectual creativity, social sophistication, and energetic commitment to work; otherwise their work will not justify wage rates that are high compared to those in less developed economies.

Problem Assumption 4: Demands for New Services. Many new programs have been started on the assumption that changing social conditions are creating new demands, and the schools must change what they do to meet these new demands. Viewed this way, the challenge of school reform is not so much a matter of stimulating productivity as of adjusting services to meet changing social needs. Non-English-speaking immigrants, for instance, now represent a large proportion of the student body in many schools. "Americanization" of newcomers to the country, a necessary goal of schooling a half century ago, is again a pressing matter. Birthrate differentials, too, between poor and middle-class families are increasing the proportion of poor children in the schools. Also, the large number of single parents and working mothers means that schools are expected to serve important child care functions. Consequently, some reformers expect the school to give children the social and character training traditionally

provided by the family and the church. At the same time, however, a second-generation "baby boomlet" is bringing in the children of older, more demanding middle-class parents, who have the political acumen to press their demands.

The Second Set: Assumptions about Policy Solutions

In addition to making assumptions about what is wrong, policymakers must also decide how to address these problems. In general, solution assumptions fall into four basic categories—power distribution, resource allocation, rule making, and belief system alteration. As we look briefly at each, remember that assumptions do not represent statements of truth but beliefs and best guesses.

Solution Assumption 1: Power Distribution. Many policy proposals assume that schools can be improved by distributing political power among the various groups who have legitimate interests in the nature and quality of educational services. Reforms that seek to reallocate power and authority among various stakeholders are based on the belief that when power is in the right hands, schools will improve. In the past this rationale was advanced to secure collective bargaining for teachers and the appointment of citizen advisory groups for federal programs. Recent arguments about power distribution have focused on the need for greater authority for administrators and on the loss of power by local school boards.

Solution Assumption 2: Resource Allocation. Another widely held assumption is that schools can be improved by appropriately linking resources to specific school services. This assumption lies behind incentive pay policies, categorical funding for school programs, and restrictive budget language. Aggressive new policies such as these are aimed at connecting resources with the quality of teacher performance or the nature of school programs.

Solution Assumption 3: Rule Making. Many policies assume that schools can be improved by formulating and enforcing better rules to govern the behavior of everyone within them. Making and enforcing such standards is, of course, an easily recognized function of both political and managerial leaders. Every policymaking agency continuously debates whether the rules and regulations are appropriate, necessary, workable, properly understood, and adequately enforced. These debates reflect the belief that rules do actually guide behavior and that rule adjustments will truly improve the performance of individuals and organizations.

Solution Assumption 4: Belief System Alteration. Policy proposals have often been based on the assumption that schools can be improved by

changing the beliefs, attitudes, or skills of individuals within them. This assumption leads to policies that support training, certification, selection, and professional development programs for educators. It also supports special programs for parents, community members, and students. Recently, the same assumption has led to policies that require inservice training for school board members.

Here we interject a word of caution. These four categories of assumptions about solutions are not, of course, mutually exclusive. To the contrary, assumptions in all four areas are needed to formulate any comprehensive policy. Occasionally, however, a policy rests on assumptions in one area that counteract the effects of those in another. In policy analysis, it is helpful to differentiate among different solution assumptions so that we can see inconsistencies and omissions.

Step Four. What Do We Know About the Policies?

While all policies embody basic assumptions about both problems and solutions, assumptions alone are not enough to get policies adopted and implemented. Political pressure and economic interests stimulate the development of policy proposals (and at the same time limit the likelihood of their adoption). Specific political and economic influences shape the development of any particular policy, but certain general factors affect virtually all policy decisions. Briefly, here are four of them.

First, for a variety of reasons, education policy initiative has been moving from local and federal levels to the state. Twenty years ago state education policymaking systems were weak and ineffectual. New education policy initiatives were generated at the national level. Unprecedented federal investments supported equity efforts and curriculum reform (i.e., the National Defense Education Act of 1958 and the Elementary and Secondary Education Act of 1965).

Today, however, a host of political, economic, and social forces have shifted initiative away from local and federal actors into the hands of state policymakers. To begin with, legislative reapportionment and the professionalization of legislative and state department staff have given state agencies the political legitimacy and technical capacity to pursue policy leadership.

Even more important, however, the election of Ronald Reagan brought a dramatic reduction in both fiscal and ideological support for former federal education goals. His administration has consistently urged stronger state and local action, keeping only a small number of issues, such as

vouchers and school prayer, on the federal agenda. The limited success of certain federal programs, coupled with strong evidence that local support is crucial in school improvement, has made the withdrawal of federal support more or less palatable.

During the past 20 years, flexibility at the local level has been curtailed, not by intent but by the cumulative effects of certain policies. Legislative reforms (stimulated by court mandates in *Serrano, Cahill*, and similar cases) were not completely successful in eliminating resource inequalities, but they removed most revenue and taxation decisions from the hands of local taxpayers and school boards. Other judicial and legislative actions have constrained local decision making in such areas as program assignment (Title IX), special education services (P.L. 94-142), and student expression of constitutional rights (*Goss v. Lopez*). In addition, collective bargaining for teachers, together with the growing expectation of due process proceedings and litigation, has produced a thorough "legalization" of education (Kirp and Jensen 1986). The resulting involvement of lawyers and judicial review processes forces the standardization of practice, limiting local flexibility. As a consequence, local control has been dramatically reduced.

Second, when it comes to education, the 50 states are part of a truly nationwide policymaking system. Despite their differences, states borrow liberally from each other, with the result that policies adopted in one state are likely to be replicated in others. The mass media, national associations (i.e., the Education Commission of the States, the National Governors Conference, and the National Association of State Boards of Education), networks of research scholars, and major interest groups (teacher organizations, textbook publishers, and the like) all contribute to a communication system connecting state policymakers to one another. This system serves also as an evaluation system, generating and assessing evidence about various policy options.

Third, local school systems have a wide variety of mechanisms for coping with state policy demands; hence, policies frequently do not have the effects anticipated by their sponsors or expected from program descriptions. The robust cultures of local systems are fully capable of challenging or subverting policy requirements adopted by state officials. Moreover, local citizens have substantial influence through their school boards and can effectively pressure teachers or administrators to adjust programs to fit local expectations.

Finally, when first implemented, major new policies almost always produce negative effects—dissatisfaction, resistance, disorganization, or

even decline in school performance. New policies and programs disrupt existing patterns of work that are essential to high productivity. It is only common sense to expect negative reactions at first, but short-term evaluations are almost certain to underestimate long-term impact. Sometimes, this reaction process works in reverse—powerful early effects fade away once the initial enthusiasm and public attention have passed and the programs become routine.

Considering what we know, are there alternatives to these policy solutions? Can we see flaws and predict directions for new proposals?

Step Five. What Are Other Ways of Thinking About the Issue?

If we are to identify other ways of thinking about solutions to school problems, we must question fundamental relationships. In Steps One and Two we identified problems and their policy solutions. In Step Three we examined the assumptions embedded in both. In Step Four we reviewed knowledge about both. Implicitly, then, we can see where strengths and weaknesses lie. We can now determine other policy needs and other directions—other ways of thinking about solutions to school problems.

In this section we suggest a few of these alternatives, classified according to the solution assumptions: Power Distribution, Resource Allocation, Rule Making, and Belief System Alteration. This classification is artificial; as we have already pointed out, a policy must draw on all four categories of solution assumptions if it is to be comprehensive. We use the classification here only for the sake of a framework.

First, as we review reform efforts to redistribute power to improve school performance, we see that local control has been weakened. Also, teachers and administrators have had little voice in policy development, and the changes in governance structures are only now being assimilated. Omissions and weaknesses in this realm should lead to policy proposals along these lines:

- An emphasis on increased decision-making power for teachers through mechanisms such as: quality circles, decision grids, roundtables, and the like.
- Decentralization of authority within systems, reserving more decision-making power to administrators of local schools.
- Pressure from school boards and superintendents for increased authority in an effort to regain greater local control.

- Increased demands for improved working conditions, including more and better equipment and facilities, improved disciplinary procedures, lower pupil-teacher ratios, and more comfortable work environments.
- Increased parent choice regarding which schools their children should attend.

Second, in imagining other ways of thinking about solution assumptions related to resource allocation, we suggest the following avenues:

- Increased implementation of the state special school or magnet school concept, linking resources with the delivery of desired services to meet the needs of special student groups.
- Incentive monies for local system innovations toward school improvements.
- Mechanisms to ensure equity provisions, in recognition of the continuing importance of preparing all students for productive citizenship.
- Strategies for addressing the social and emotional needs of students, such as

(a) lower pupil-teacher ratios,

(b) the provision of "houses" within the larger school to serve as primary affiliation units and the training to manage this structure for teachers and administrators,

(c) student internships in the work world, and

(d) mentorships for students in business and the professions.

- Alternative programming for at-risk students.
- Increased efforts to improve tax structures to meet funding needs.

Third, when we envision solutions based on the rule-making assumption, we see the following areas emerging:

- Pressure to employ strategic planning methods as frameworks for ensuring implementation and accountability.
- Options for waiving state regulations in pursuit of innovative local efforts to achieve school improvements.
- Demands for refinements of policies to lessen bureaucratic excesses.

Fourth, in developing policy proposals based on the solution assumption about alterations in belief systems, we suggest the following possibilities:

- Emphasis on renewal programs for teachers and administrators, including

(a) exchange positions within education such as between university and K-12 classroom teaching,

(b) workcycles for educators in business and the professions, and

(c) sabbaticals for graduate and postgraduate study.

- Pressure to influence belief systems outside the school, including
  (a) corporate identity strategies for school systems,
  (b) increasingly sophisticated communications planning at local and state levels, including employment of information officers and media consultants, and
  (c) systematic interaction of professional organizations with the press and media organizations.
- Emphasis on community provisions for education as necessary supplements to schooling, including quality of life amenities such as cultural and artistic resources.

Now that we have suggested other ways of looking at solutions to the problems of general school reform, you will no doubt be able to add alternatives of your own. In so doing, you will be preparing for the next wave of changes in education policy. After all, the reforms can be reshaped, changed, and improved in the light of our enhanced understanding of them.

At this point we have walked through the five-step method of policy analysis on the topic of general school reform. Next we present three specific examples in the following sections: student testing, salary structures, and administrative training centers. In certain respects, the specific topics lend themselves more readily to analysis than does general school reform. As we examine specific policy responses, we can better understand the process of policy analysis.

Specific School Reform Policies

THIS SECTION APPLIES THE FIVE-STEP METHOD OF POLICY ANALYSIS TO THE FIRST of three specific educational issues. We expect our analysis to yield a narrower focus and greater clarity than we achieved in looking at general school reform.

Student Testing

Complaints about student achievement are nothing new, but when those complaints are underscored by persuasive data that threaten national pride, they indicate a problem of dramatic proportions. Such a situation developed during the 1960s and '70s. Indeed, this problem may have sparked the entire reform movement. We review its manifestations and briefly note the influence of the demand for accountability before moving to the policy solution.

Step One. What Is the Problem?

Year after year between 1963 and 1980, concerns about student achievement were heightened by media reports that the average verbal and math scores on the College Board Scholastic Aptitude Test (SAT) had fallen consistently (Murnane 1985). In 1983, *A Nation at Risk* asserted that 13 percent of the nation's 17-year-olds were functionally illiterate. The report also charged that student achievement had declined steadily for the past 26 years. In addition, the National Assessment of Educational Progress (NAEP) revealed a dismal record for 17-year-olds between 1971 and 1982. Test scores reported by the NAEP showed steady declines in vocabulary, reading, and mathematics (Contractor Report 1985).

Minority students, however, showed gains in achievement between 1970 and 1980. NAEP scores of student writing reflected improvement for minority students. *Phi Delta Kappan* reported: "Black teenagers improved on nearly all the writing tasks administered to 13- and 17-year-olds, narrowing the gap between their performance and the national average of others." In 1982 both verbal and math SAT scores rose slightly, with the greatest gains made by black students (Powell and Steelman 1984).

Nevertheless, the overall decline in achievement was persistent and alarming, and test scores were only part of the concern. The business community blamed the schools for failing to prepare students adequately in basic skills. In fact, business leaders charged that the decline in achievement paralleled the decline in performance of American workers, who were producing inferior goods and services not competitive in world markets. The schools were criticized for lower academic standards, lower student expectations, a watered-down curriculum, and poorly trained teachers (Contractor Report 1985).

This rather clear definition of the problem was accompanied by another influence—demands for accountability. The public was willing to pay for education but wanted *results*. In the stiff competition for dollars, policymakers needed quantifiable student performance data to maintain reform initiatives and to identify potential new policy directions (Burnes and Lindner 1985). Student testing appeared to be a convenient and legitimate means of assessing education's performance and justifying its costs. Policymakers believed that testing could effectively check declining achievement and make education more accountable for its huge costs. State testing became a preferred means of monitoring educational reform (Anderson and Pipho 1984).

Step Two. What Does the Policy Look Like?

State testing policies, then, addressed a problem, as we expect policies to do. The solution also displayed a power of its own in its spin-offs—student testing promised a sort of "bottom line" for managing reform.

What did the policies look like? Policies directed toward assessing student performance outcomes took a variety of forms. Most initiatives required norm- or criterion-referenced testing in language arts, mathematics, science, and social studies; some policies expanded the focus to include the fine arts, humanities, and higher-order thinking. States increased the number of administrations of standardized achievement tests at all levels and established proficiency tests as gateways for promotion and graduation. State policies varied chiefly with respect to specific grade levels tested, local options, measurement procedures, content domains, and procedures for reporting test results.

Interestingly, the mandates requiring testing programs reinforced the growing phenomenon of state control. As state departments established achievement standards and determined how testing would be administered, local educators became increasingly concerned about their loss of auton-

omy. This tension between state and local interests became a political battle cry in some states, resulting in efforts to unravel the reform legislation.

Step Three. What Assumptions Are Embedded in the Policies?

At this point it is important to recall that these assumptions are not necessarily conscious in the minds of policymakers; rather, they are inherent in the policies. Our analysis of state testing policies suggests that policymakers based their actions on at least one problem assumption and several solution assumptions.

Their problem assumption focused on the erosion of American education and the decline in student achievement. In other words, policymakers were assuming that school productivity had declined substantially. They also believed that decline to be directly related to the poor showing of the nation's economy.

With data available to substantiate education's problems, policymakers saw student testing as an efficient way to monitor educational reform. This understanding was based on four solution assumptions, drawn primarily from the belief that better rules and regulations will improve school performance.

- First, test scores are valid and reliable measures of group performance; therefore, data obtained from testing can be used to establish and maintain achievement standards. Also, careful alignment of test items with curriculum content would enhance student mastery, thus improving achievement.
- Second, the use of testing as a gateway for promotion and graduation would motivate students to achieve. Murnane (1985) reported that at least 17 states introduced with their reform mandates minimum competency examinations that students had to pass in order to graduate from high school.
- Third, student test performance is a legitimate means of evaluating school programs and personnel. Test data could be used to measure school quality, teacher competence, and administrative leadership. In addition, the use of test results would motivate school personnel to facilitate improvement.
- Fourth, test results could be easily understood by the public. School and system test score averages could be published and comparisons easily made. Parents, reformers, taxpayers—all could readily evaluate school productivity and monitor the effects of the reforms. This assumption, of course, underscored the accountability purposes of the policies.

Clearly, student testing became a powerful tool and a major influence on education by the 1980s (Anderson and Pipho 1984).

Step Four. What Do We Know About This Issue?

At this step in policy analysis, we marshal what we know about student testing. Here we are looking for discrepancies between the assumptions embedded in the policies and what we know about the issue.

The belief that state-mandated testing can improve student achievement may be overstated. Historically, American students have undergone more standardized testing than students in any other country (Goodwin and Muraskin 1985). However, the way in which test results are used may be more important than the number of times students are tested.

According to the literature, testing increases student tracking. Tests are often culturally biased and inappropriate for low socioeconomic students. Also, tests may actually measure development rather than achievement or performance. Studies examining test validity, test bias, racial differences, and cultural factors strongly suggest that testing misrepresents the abilities of special populations because of misclassification and test unfairness. For example, David Owen (1985) criticized the SAT as biased in favor of white, upper middle-class, suburban students.

In addition to the potential inequities of testing, there are weaknesses in test construction. Item selection, time limits, the wording of items, and errors in measurement raise questions about the predictive value of standardized testing. Standardized test results may be viewed as rather gross measures of group performance. Even then, caution in interpreting data is wise—even essential when using test results to assess the performance of individual students.

Even when taken together, basic skills test results and standardized test results together do not constitute a comprehensive framework with respect to achievement and accountability. Student performance is multidimensional; therefore, reliance on any one indicator to draw conclusions is unwise and could have negative consequences for districts and schools, as well as for individual students (Powell and Steelman 1984).

This point becomes increasingly clear as the research on learning and thinking is reported in the literature. Learning and thinking are complex activities, and tests in their present stage of development tell little about the process of thinking. This inadequacy becomes even more relevant in light of such characteristics as judgment, imagination, and creativity, and social and emotional health—all needed to succeed in our complex society.

Reporting test results to the public must also be carefully weighed. The assumption that test results are readily understood may be unwarranted. Educators themselves rarely claim thorough understanding of test construction, the standardization process, standard error and standard deviation, and the various scores (grade equivalents, percentiles, stanines). Test data represent sophisticated statistical concepts, but the public's comprehension is probably limited to knowledge of percentages. Then, too, no matter how well we understand test data, the reduction of a matter as complex as student achievement to a few numbers creates a misleading impression rather than a true picture.

A final consideration is the potential effect of testing upon curriculum and instruction. With so much importance attached to basic skills, teachers may concentrate on lower-order skills. Content or process that does not appear later as multiple choice items may be sacrificed, and the test in effect becomes the curriculum. In addition, the fragmentation of content into "mastery" skill objectives may obscure a discipline's cognitive frame of reference. For example, in mathematics an emphasis on computation skills usually obscures higher-order structures such as problem solving.

Step Five. What Are Other Ways of Thinking About the Issue?

The student testing solution addresses both the problem of declining student achievement and the public's need for accountability. As we have seen, the connections between problem and solution are reasonably clear and logical. When we contrast the embedded assumptions with our knowledge base, however, we recognize that the logic of the assumptions has limits. This recognition constitutes an understanding of the strengths and the weaknesses of testing policies. In focusing on the limitations, we can make educated guesses as to possibilities for change in testing mandates. Specifically, we consider these other ways of thinking about the issue within the context of the four solution assumptions mentioned earlier: power distribution, resource allocation, rule making, and belief system alteration.

Power Distribution. Testing policies can be amended to increase local options, especially to encourage school-based efforts to improve student achievement. Such options may include waiving requirements (for example, frequency of testing or choice of test publisher). Faculties might choose to spend less time on testing and more on instruction, or they may decide to select or develop tests more closely related to the curriculums in their schools. These adjustments, which involve the rule-making assump-

tion, would depend primarily on whether the benefits of increased local control are recognized.

Resource Allocation. Student achievement can be improved by reallocating resources—financial, teacher, and student—to provide more open-ended assessment of student performance. "Open-ended assessment includes oral interviews, self-evaluation, holistic scoring and teacher/student evaluation of critical questions" (Ryan, p. 17). This broader assessment affirms the value of multiple measures of student performance, the inclusion of higher-order thinking skills, and the recognition that there is no one way to test performance. Open-ended assessment may provide an alternative to paper-and-pencil mastery tests by addressing the larger questions of how students comprehend, analyze, and synthesize information. Open-ended assessment offers a comprehensive framework for the measurement of both intellectual growth and the abilities necessary for students to succeed in contemporary society.

Rule Making. A rule-making change in teacher certification standards has the potential to affect both student achievement and the public's need for accountability. The solution assumption is that tougher certification standards will ensure more qualified and competent teachers who will improve student achievement. Typically, Murnane (1985) wrote, policymakers have increased certification standards in three ways: "One common change has been an increase in the amount of formal training a teacher must complete before being eligible for certification. A second change is that applicants for teaching positions must score above a minimum grade on a standardized exam. A third type of new requirement is that teachers undergo on-the-job observation and evaluation before receiving certification." (p. 134).

There are limitations to the solution of tougher teacher certification standards. If demand for teachers exceeds supply and districts have limited financial resources, policies may be enacted to waive certification standards; such lowering of standards may diminish the quality of candidates for teaching positions.

Another rule-making solution is to establish more rigorous curriculum standards. The assumption is that a more demanding curriculum will improve student achievement because of higher expectations. An increase in curriculum standards underscores the belief that there is a body of knowledge students should acquire and that the need for knowledge will inspire greater attention to that end. Natriello and Dornbusch found that students confronted with an increased academic challenge tend to devote more time to education (Goodwin and Muraskin 1985).

The strategy of increasing curriculum standards is not, of course, a guarantee of achievement. Higher expectations may increase levels of frustration for lower-ability students who cannot meet the challenges. This potentially negative outcome must be weighed carefully when considering policy solutions that elevate curriculum standards.

Belief System Alteration. A belief system alteration solution would focus on changing the beliefs, attitudes, and skills of individuals. If this assumption is applied to the goal of improving achievement, we would try to change the belief systems of students, teachers, parents, and community about the value of education. Strategies to alter beliefs would address demographic and cultural needs within the school setting, the synergistic relationship of school and community, and the importance of learning in the community's future. This solution requires willingness and commitment on the part of many constituencies. Collaborative school-community action teams could address such matters as the expectations of school and community, student abilities, community resources, curriculum goals and objectives, school atmosphere, and the like. Although belief system alteration may be the most difficult solution, it may be the most effective in terms of significant and lasting improvement.

State-mandated testing has become a powerful tool for policymakers. Serious consideration must now be given to the effects of testing on education. If the solutions do not solve the problems of achievement and accountability, or if they create new, more complex problems, then the alternative ways of thinking about the issue may be productive choices. Certainly, the limitations of tests are justification enough for considering alternative solutions.

Salary Structures

Teacher salaries have historically lagged behind salaries for other professionals of similar training levels, despite certification standards, collective bargaining, teacher shortages, and waves of reform emphasizing the importance of schooling. Teacher salaries have remained somewhat insulated from the marketplace. Officials have maintained their allegiance to low tax rates and conservative public spending. In addition, teaching attracted primarily women, minorities, and others from low socioeconomic levels.

Recently, however, the decline in student achievement precipitated a closer scrutiny of teacher performance. In their review of the decline, policymakers identified poor teaching as a problem.

Step One. What Is The Problem?

Questions about the quality of teaching came from several directions. In the late '70s, a falling birth rate yielded enrollment declines. Reductions in force became common, and few new teachers were employed. Thus, the median age of teachers rose rapidly, and the stimulation of new workers dwindled.

During the same period, those who had entered teaching in the past—women, minorities, children of the poor—were provided broader economic opportunities and career choices. The pool of candidates for the teaching profession had shrunk dramatically as a result of the social reforms of the '60s and '70s.

Teachers themselves expressed strong interests in work conditions apart from salary. They reported that the conditions of teaching had become less attractive and that teachers were given low status in society. Further, the heavy and conflicting demands made on teachers often created stress and emotional problems. Adverse working conditions and low esteem had made teaching less desirable.

These difficulties were compounded by reports that college students who entered teacher education were those of lower ability and that a large number of new teachers left after their first year. An estimated 50 percent of those who entered teaching left after seven years, and those who left were thought to be the more able.

In addition, intense dissatisfaction with teaching performance arose from the declines in achievement. Tenure rights, administrative ineptitude and complacency, and minimal evaluation procedures were seen as protecting poor teaching in the nation's schools. These factors intensified demands for accountability, which emphasized the need to weed out poor teachers.

These influences, then, shaped the thinking of policymakers. The problem of poor teaching called for action to remove poor teachers through formal evaluation, attract able young people into the field, and reward and retain superior teachers.

Step Two. What Does the Policy Look Like?

Again, as with student testing, the problem definition is clear, and the public's need for accountability is a strong accompaniment. Policy solutions based on salary structures address the problem of poor teaching by promising to reward outstanding performance and to make teaching more

attractive. The accountability aspect has been met through policies instituting stringent evaluation procedures designed to remove poor teachers from the ranks. We have limited this analysis to salary structures.

Traditionally, teachers have been paid on the basis of years of experience and levels of education. Salary schedules, with their step-by-step increases, have been built on those two dimensions.

Reform efforts have generally increased base salaries but also have established incentive pay for a small percentage of the teaching force. Increases in base salaries attempt to bridge the gap between teacher salaries and those of workers with comparable training. Incentive pay is designed to motivate high performance and to attract or keep those who would otherwise leave teaching. Incentives range between $200.00 (teacher grants) and $7,000.00 (career ladders) above the salary schedule steps.

Incentive pay plans take various forms:

- Career ladders—differentiating positions with appropriate responsibilities, similar to systems used in higher education.
- Mentor teachers—identifying senior teachers to assist newer teachers and thereby to receive extra pay for their duties.
- Bonus programs—paying teachers a stipend at the end of the year for achieving specific agreed-upon objectives.
- Merit pay—identifying superior teaching performance and paying higher salaries to those who perform at a superior level.
- Teacher grants—providing stipends to teachers to carry out projects they have designed.

A majority of the states have enacted or will soon enact legislation that mandates some form of incentive pay for teachers. The policymakers hope that the combination of higher base salaries for all with incentives for the more able will solve the problems of attracting bright young people into teaching and rewarding superior teaching performance.

Step Three. What Assumptions Are Embedded in the Policies?

Whether consciously or not, in their attention to salaries, policymakers are operating on assumptions about the power of financial rewards to motivate work performance. They assume that compensation systems can offset changes in the conditions of teaching. Organizational changes in the schools (collective bargaining, categorical program development, and the like) have blurred the distinction between "regular" and "extra" duties for teachers. They have also changed the nature and types of nonprofessional duties assigned to teachers and altered systems of supervision and evalua-

tion. In making the assumption that salary structures can shape teacher job performance despite the importance of these other factors, policymakers are embracing specific viewpoints about both the problem definition and the solution strategies.

If we look into the definition of this problem, we find that policymakers made at least three problem assumptions. They believed that declines in school performance resulted from a lack of salary incentives to reward high-performing teachers (Problem Assumption 1: School Productivity Decline). Also, they believed that teacher shortages could be overcome by increasing total compensation for all teachers or by providing strong salary incentives for high-performing teachers (Problem Assumption 2: Inadequate Resources). In addition, they assumed that (a) the need to prepare skilled workers for a high-tech economy, and (b) demands for new school services will require highly qualified teachers who will demand monetary incentives (Problem Assumptions 3 and 4: Weakness in the National Economy and Demands for New Services).

When we analyze salary policies, we find another assumption—that problems are solved by linking resource distribution to delivery of specific school services (Solution Assumption 2: Resource Allocation).

First, a review of traditional salary schedules reflects beliefs such as these:

- For training-based salary schedules, the value of teachers' work becomes higher in direct relation to the amount of training they receive.
- For experience-based salary schedules, either the value of teachers' work increases in direct relation to the amount of experience they have, or salary increments are necessary to maintain teacher loyalty to the profession.

Second, for all salary structures that pay some teachers more than others, it is assumed that:

- Teachers are motivated by both the amount of money and the contingencies upon which receiving the money rests.
- Teachers are attracted into the profession based on their estimates of how much they can earn, and they will be motivated to perform well by high starting salaries and high earning power.
- Poorly paid teachers will perceive the greater worth of their highly paid colleagues and will be motivated either to emulate their job performance or leave the profession.
- Poorly paid teachers, conversely, will not perceive lower levels of pay for nominally identical jobs as justification for performing poorly on the job.

- Parents whose children are assigned to lower-paid teachers will accept this treatment without creating unmanageable political problems for the school system.

Third, in the case of incentive pay systems, policymakers assume that:

- High-quality teaching is well understood and can be measured reliably so that we can accurately assess the value of teachers' work performance.
- The results of good teaching can be seen during or immediately after instruction so that the value of the work can be assessed within the timeframe used to make compensation decisions.
- It is not possible to distract teacher evaluators or feign excellence in one's teaching; hence, we can be confident that good teachers will be rewarded and charlatans will not.

Step Four. What Do We Know About Salary Policies?

In Step Four we come to the review of what we know about salary policies in order to assess their strengths and weaknesses. Again, we are looking for discrepancies between the assumptions and the knowledge base.

Recent research supports several important conclusions about teacher salary policies:

- Teachers are paid substantially less than comparably trained workers, and their real wages have dropped substantially in the last 15 years. One study indicated that teachers would need a 30 percent salary increase just to regain the position they held relative to other workers in 1970 (Baugh and Stone 1982).
- Collective bargaining has neither large nor consistent effects on the overall level of teacher salaries. After formal bargaining first begins, teachers appear to make salary gains, but within a few years they are doing no better than nonunion teachers.
- Some principals' teacher evaluations are influenced by their values regarding pedagogical style rather than the teacher's work efforts. Principals with a commitment to child-centered methods give noticeably higher ratings to teachers using these methods than principals who have subject matter oriented pedagogical views, regardless of the effectiveness of the preferred technique.
- In nonteaching environments, incentive pay schemes have led to tension among workers and to substantial tensions between workers and managers. In the classic study of the Hawthorne electrical plant bank-wiring

room, workers were found to have a potent social system for controlling work performance that negated the effects of an incentive pay plan. In another study involving a piece-rate incentive system, fur trappers violated company policy by poaching on one another's territory to gain a salary advantage.

- Equity principles are applied by workers to their salaries. If they feel they are underpaid compared to other workers, they adjust their work effort downward until they feel the result is equitable. Not only is effort reduced, but it is hard to predict when or how much of a reduction will be forthcoming because workers place very different subjective values on identical salaries and other work incentives.
- Only a very few incentive pay plans have lasted more than a few years in school district settings. The lasting incentive pay plans possess one or more of three elements. First, the incentive payments are small compared to base salaries, leaving teachers relatively free to ignore their economic impact. Second, incentives go to virtually all teachers, so that individuals are not singled out as having special merit relative to others. Last, nonteaching criteria are used to award merit pay so that teachers feel that the payments are for "extra" work, or at least for work that can be evaluated more objectively than their teaching behaviors (Cohen and Murnane 1985).
- When asked about the important functions served by teacher unions, individual teachers give greater attention to "professional" than to "economic" issues.
- Linking extrinsic payments to work previously considered intrinsically valuable leads workers to reduce their commitment to the work and begin focusing on the size of their paychecks.
- The effects of good teaching may not be measurable until long after compensation decisions are made.
- When rewards are distributed on a zero-sum basis to indivduals, the result is competition rather than cooperation in the execution of tasks. This phenomenon recalls the results of the fur trapper study, which a number of other studies support. Research on cooperative learning is showing this process to be reversible: when rewards are distributed for cooperation, cooperation results.
- Entry into a professional group is often governed more by the "opportunity costs" (foregone income during training) than by the "reward incentives" (expected income). The promise of high salaries encourages high investment in training, but young people must have the needed finances to make the investment if that strategy is to be effective. Scholar-

ships and loans could be much more effective than high teacher salaries in attracting low-income youth into the teaching profession.

Step Five. What Are Other Ways of Thinking About the Issue?

Once again, we have compared the assumptions embedded in policies with our knowledge base about the issue. We can recognize several points of clear contradiction along with several points of harmony. As we sift through these comparisons and contrasts, we can see avenues for change and refinement in the policies.

If we accept the problem assumptions relating to poor teaching, it is still possible to approach the solution in very different ways. For example, if we draw upon a political power distribution approach to problem solving, as a few districts are, we would concentrate on defining the appropriate powers to be given to teacher organizations and teachers. It would be important to give them the power to control conditions that interfere with job performance, but not the power to avoid accountability.

If we adopted rule-oriented assumptions for solving the teacher quality problem, we would aim not at salaries but at certification, supervision, and work-rule modifications. More effective rules governing work performance or teacher preparation could be expected to produce better performance without touching the salary question. Indeed, many states have attached their salary improvements to certification, supervision, and work-rule requirements.

If we relied on the belief system alteration assumptions related to changing attitudes, beliefs, and skills, we would construct policies that would emphasize support for teachers: staff development, socialization, and creating new patterns of interaction between teachers and students, parents, other teachers, administrators, and community members. Such efforts are being piloted in several places.

Policymakers have addressed the matter of quality in teaching with an extensive policy response, the dramatic alteration of salary structures for teachers. Our analysis has pointed out promising avenues for improvements in the policy solutions themselves. As we pursue these improvements, we will be hoping for better and better teaching in the nation's schools.

Administrative Training Programs

The availability of solutions, rather than the primacy of the problems, was the driving force behind reforms related to administrative training

programs. Assessment centers, packaged training, and leadership academies, which had already been developed, provided ready answers, if they could just be attached to problems. The matter became one of matching existing solutions with apparent needs; for example, looking at assessment centers and deciding how to use them to upgrade administrators' skills.

This distinction, of a "solution-driven policy," is important as we analyze and evaluate reforms. We are all familiar with instances where a ready answer (say, a musical show already performed at school) can be employed to fill a need (entertainment at an administrators' banquet). Policymakers are just as likely as we are to start with a solution and then connect it to a problem.

Although teachers bore the brunt of accountability demands, administrators did not get off scot-free. If students were not achieving enough, teachers must not be teaching well enough, and, logically, administrators must not be doing enough, either. This progression coupled nicely with the training solutions already at hand.

Step One. What Is The Problem?

Many social and political leaders contend that leadership is a major problem in public schools. Their concern has been fueled by private sector literature, effective schools research, and the trend toward decentralization of authority in school districts and corporations. When schools or businesses are successful, their success is attributed to leaders who improve worker motivation, productivity, and quality. Especially important is the link between leadership and the effort to regain our competitive position in the world market.

The question of leadership in education is also influenced by the following changes within the profession:

- Incentive pay programs with their requirements that administrators conduct evaluations to differentiate levels of performance.
- Collective bargaining and its effects on administrative prerogative.
- Rapidly changing expectations for school programs.
- Conflicts between the increase in state rules and regulations and the need for aggressive "instructional leadership."
- The school-based management movement, which establishes the school as the basic unit of improvement and the principal as the key to success.
- Technology and its impact on instruction and information processing.

The problem of leadership is complicated by differing interpretations of what constitutes "instructional leadership." Research in instructional leadership is new, not extensive, and often questionable. General definitions often conflict with the kinds of action needed in specific schools. Nevertheless, *instructional leadership* is commonly defined as the ability to articulate and establish the correlates of an effective school.

Most practicing administrators, however, have not been trained in instructional leadership functions—curriculum monitoring, personnel evaluation, use of test data, achievement analysis, and instructional focus. Furthermore, most administrators are over age 50 with no strong motivation to retrain.

Step Two. What Does The Policy Look Like?

The major policy response to this problem has been to establish assessment centers and leadership academies. For the most part, centers serve those who wish to become administrators, while academies train practicing administrators to develop new skills and acquire new attitudes. Centers evaluate an individual's potential for becoming a successful school leader. Academies have typically based their training on effective school research and practice. Centers concentrate on recruitment and selection, while academies teach new skills or improve old ones.

Legislation in this area usually requires that all school leaders receive some training, part of which may be "packaged" and conducted by private sector sources. In a few states the law requires administrators who receive unsatisfactory evaluations to attend training sessions for "remediation" or recertification.

Assessment centers and leadership academies may be operated by state departments of education, colleges or universities, or large school districts. The aim of both is to upgrade educational leadership; both have strong support from administrators.

Step Three. What Assumptions Are Embedded in the Policies?

In the case of administrative training, policymakers connected existing options with the need for preparing administrators to assume new roles. Even in "solution-driven" reforms, assumptions are embedded within the policies, whether or not policymakers are conscious of those assumptions. As we proceed in our analysis, we uncover certain assumptions implicit in these training policies.

Problem assumptions about educational leadership relate primarily to the school productivity decline manifested in falling test scores. As policymakers addressed the problem of declining achievement, they first criticized teacher performance, then school administration.

In addition, the reformers believed that demands for new services called for new skills and attitudes on the part of administrators. Many of these demands arose from the reforms themselves, such as more rigorous teacher evaluation and the emphasis on instructional leadership. Others resulted from developmental changes, such as the implementation of computer labs and increased parent involvement. These demands dramatically altered expectations about the responsibilities of administrators.

The effort to upgrade educational leadership was based on several solution assumptions, almost all focused on changing the beliefs, attitudes, and skills of administrators. To that end, several assumptions have been made about school leadership, the institutions that train administrators, the content of the training, and the mode of delivery of the training.

First, a major assumption is that principals play a key role in schools. This belief was substantiated by the findings of the effective schools research; however, principals have traditionally borne the primary legal responsibility for school operation. Similarly, communities have long-standing expectations that the principal is in charge of the school. Then, too, principals make up the majority of administrators, with others in much smaller numbers. Practically speaking, reforms could not succeed without addressing the needs of principals.

A second assumption underlying these policies is that the universities were not doing their job. The effectiveness of graduate schools in preparing administrators was seriously questioned.

A third important assumption is that the state must prepare administrators to fulfill the new demands placed on them. With traditional training considered unsatisfactory, the reformers assumed control of certain preparation and selection options, especially those necessary to support other reforms.

The fourth major assumption is that we know what skills are necessary for the improvement of administration and, further, that these skills are teachable, learnable, and testable within the limits of academies and centers. The skills of facilitation, participatory decision making, building team efforts—all attributed to successful corporation managers—are the skills assumed to be needed by principals.

Finally, the training is assumed to be practical and sharply focused, yet based on research findings. Also, the trainers are assumed to be competent

and capable of retraining administrators or assessing the potential of those seeking leadership positions within very brief time frames.

Step Four. What Do We Know About This Issue?

Effective schools research has described the critical role of principals in providing the conditions that make it possible for students to learn. Those conditions include such things as promoting norms of continuous improvement, creating collegiality, buffering teachers' use of time, and involving teachers in decision making. Recent research in business highlighting successful organizations is also being used to influence new views of collegiality, sharing, networking, and commitment building.

The latest research on the role of the principal reveals that successful principals come in different work styles. In a study of six effective schools, Dwyer found that principals focused on different areas depending on their ideological differences. Some worked heavily with the community and left the teaching to the teachers. Others were primarily involved with the students and the teachers, while still others were chiefly concerned with the curriculum. All were "effective." Successful leadership appears to be both context bound and highly individual.

Short-term training effectively raises awareness levels but rarely enables administrators to change their work styles once they have returned to their schools. Most of us have felt enthusiasm for new ideas during inservice workshops, only to lose the excitement in the daily grind. Far-reaching changes in work roles require time, exploration, and support.

Step Five. What Are Other Ways of Thinking About the Issue?

In this example of a "solution-driven" policy, the connections between problem and solution are relatively straightforward and logical. Even when we compare the assumptions with what we know about the issue, we find strong support for the success of administrative training options. Nevertheless, let us consider other ways of thinking about administrative training within the four categories of solution assumptions, by now familiar to us.

Power Distribution. A sensitive power question is illustrated by the conflict between increased rules and regulations on the one hand and calls for greater autonomy of principals on the other. A potential refinement of training policies could address this power question, perhaps with an

assistance model for school-based problem solving or local training options designed by principals for their schools.

In graduate schools, we expect renewed policymaking as faculties redefine preparation programs for administrators. These efforts will not be confined to the power question, but faculties will no doubt consider strategies to generate a strong voice in political decisions affecting their departments.

Resource Allocation. Leadership in education can be improved by providing the resources for adequate clerical and support personnel for principals and supervisors. The new demands have resulted in work overloads for practicing administrators. These overloads are intensified by the paperwork required by accountability demands for student achievement and teacher evaluation, rather than the leadership skills of focusing on purposes, building collegiality, participatory decision making, and the like.

Rule Making. To further upgrade administration, policymakers may consider new standards of certification and performance. Avenues for exploration include more rigorous academic preparation, long-term internships, mentorships, and exchange programs with the private sector.

State policymakers could institute administrative reviews based on a support team assistance model rather than a compliance model. In such policies, state evaluation processes could take into account the varied contexts and problems in different administrative sites. These more comprehensive policies would embrace not only administrative training, but also plans for a broad array of supervisory staff, thereby allowing for changed roles in additon to that of the principal (LD 12-28, "An Act to Provide for State Certification of School Administrators," State of Maine, House of Representatives, 112th Legislature).

Belief System Alteration. Instead of taking administrators out of their contexts to reshape them we could promote the school site as the center for improvement (Goodlad 1984). This approach would entail creating a more professional culture. Teachers, principal, and community could be engaged in a variety of structures to mutually support total school learning and improvement. Indeed, many school districts are engaged in school-based improvement efforts.

Networks that join people together in like ventures, which include both information sharing and psychological support, are still another way to engage principals and supervisors in becoming committed to their own learning. Creating a support network for top management is also a promising possibility.

Partnerships between universities and schools are another mechanism

to support innovation and change and to provide different and higher expectations for school improvement and leadership behavior. Partnerships such as the Metropolitan School Study Council and the Harvard Principal's Center provide an opportunity for principals to reflect on and learn from each other's practice.

An overemphasis on the principal unrelated to the school and the district may disguise the complex conditions that must be improved to create better schools. Principals are very important, but they cannot improve the school by themselves. Gaining support from the district and learning how to work collaboratively with their staffs suggests the building of support systems from the district, professional associations, and colleges and universities, as well as from businesses. In Maine and California, for example, principals and teachers are learning to work together to improve their schools. Emphasizing the local school calls for partnerships of large numbers of constituents, all invested, involved, and committed to school improvement.

Empowerment and Emerging Issues

Empowerment

In the first two sections of this report, we illustrated a five-step method of policy analysis to instruct and thereby empower education practitioners to evaluate policies and influence policymaking. As school districts, professional organizations, and networks grasp opportunities to reform the reforms, they will look for assistance in the process. We hope this method will provide part of that assistance.

This section offers suggestions on the process of policy analysis apart from the method. It is followed by descriptions of emerging issues soon to face policymakers and educators who want to influence policymaking more effectively than they have in the past.

Formation of a Policy Analysis Group

As we have seen, we can analyze policies by asking questions to examine their elements and relationships. While such questions can be asked by either individuals or groups, we prefer groups in order to have more than one point of view represented. How should such a group be selected and convened?

An effective method of group formation is based on the concept of "stakeholders." A stakeholder is a person or group who has an interest or "stake" in a specific policy. For example, parents, teachers, central office staff, and the federal Department of Education all have a stake in policies for disadvantaged youth. The involvement of stakeholders reflects our first solution assumption, that of power distribution.

In forming a group, you may begin by listing all the stakeholder categories. If this list is more extensive than your resources, a second step is to establish a shorter list of the highest priority stakeholders. Once you have identified the categories, you can select specific names of representative stakeholders; the interests of any given stakeholder are at least partially offset by others' views. Through this approach your group is more likely to be balanced in their appraisal of a policy.

Policy analysis groups should consider the inclusion of professional analysts as resource people. Policy institutes and university departments can often identify staff members with specialized knowledge and experience. If these resource people cannot commit much time to the enterprise, they may agree to review the group's deliberations at checkpoints during the process.

Selection of a Chairperson

The sponsoring organization should select the chairperson of a policy analysis group. In ASCD's experience, the most successful chairs are those who are (1) credible, (2) respected by other group members, (3) capable of developing consensus, and (4) able to see the "big picture." An effective chairperson guides the group through the development of the analysis. She or he is sensitive to individual agendas (and the need to make them known), to points of possible cooperation, and to the need for a unifying theme or theory.

Information Resources

Whether an analysis is performed by an individual or a group, a primary resource—information—is required. At a minimum, this requirement includes all public documents relating to the policy, such as speech transcripts, planning documents, drafts of legislative bills, state rules, and the like. In addition, research reports on both the problems and the solutions are invaluable, and syntheses of research are particularly helpful. All commission reports and relevant scholarly writings should be available to provide definitions of problems and proposed solutions.

Policy is notorious for its ability to change between conception and implementation; therefore, it is of special import to obtain testimony and documents from several sources. Guba (1984) proposed eight different definitions of policy that may lead analysts to different sources of information. For instance, policy seen as intention leads the analyst to sources such as a governor's public statements, while policy seen as implementation leads to such sources as state and local district regulations. Policy seen as the experience of clients would, in turn, lead to such sources as stakeholder descriptions of its impact on them.

Questions for Analysis—The Five Steps Elaborated

With stakeholders, chairpersons, and information resources in place, the group is ready to examine policy. In this paper we have approached policy analysis by asking five questions about each policy we analyzed. These questions can be further delineated and asked about policies that are important in your setting.

- *What is the policy?* What are the goals of the policy? What are the regulatory mechanisms proposed to achieve these goals? Is the policy driven by a problem, a solution, or by knowledge?
- *What assumptions are embedded in the policy?* What assumptions are made about the nature of educational problems? What assumptions are made about the kinds of solutions to be employed?
- *What do we know about the policy?* What do we know from research? From practical experience? From the observations and judgments of scholars?
- *What do we know about the policy's intended effects?* What other effects is it likely to have?
- *What are other ways of thinking about the problem or the policy?* Are there other assumptions that can be made about the problem? Are there other approaches to the solution?

Emerging Issues for Policy Considerations

These questions may be productively asked about issues soon to capture our attention, including parent choice, technology, schooling for special populations, and education's relationship to economic development. We describe each of them in this section. Your state may already be grappling with these issues; for your analysis to be most useful, you should place each issue in the context of your state and local area.

Parent Choice

"Parent choice" refers to parents' option to select the schools their children attend. It takes several forms:

- Open enrollment—freedom to choose any public school within a district.
- Home school—freedom to educate their children at home.

- Alternative school—freedom to set up their own school financed by public funds.
- State choice—freedom to choose any public school within a state.
- Vouchers—freedom to choose any private or public school within a school district or within the state.

For many years parent choice has been expressed in open enrollment, alternative schools, home schools, and a limited voucher system, which was tried by one California school district. Recently, parent choice has been more forcefully expressed through legislation for state choice in Minnesota, aggressive home school developments in several states, and the federal interest in vouchers and tuition tax credits. It is also seen in the magnet school movement, which allows parents to send their children to a school of special interest.

A number of reasons, however, ensure that parent choice will soon demand even greater attention. Secretary of Education Bennett and others believe that parent choice is a way of improving the quality of public schools. They assume that competition and the market system will improve all schools; those that cannot provide services acceptable to parents will not survive; parent choice thus becomes one solution to the problem of quality. In addition, the home school movement is gaining momentum. In most states, home schools are unregulated, raising doubts about the quality of their instruction. The state's interest (that all children be well educated) at times conflicts with parents' desire to exert their power to choose any school, regardless of quality.

Parent choice will also be sought as new accreditation programs are developed, especially when such efforts separate effective from noneffective schools. New methods of accreditation measure what happens to students, the learning and teaching conditions of the school, and its "quality of life." Such measures will increase the desire of parents to choose their own schools.

Similarly, choice is likely to be supported by current efforts in the evaluation of teachers and in incentive pay programs. Such efforts purport to identify "better" schools and "more able" school personnel. Parents may seize these identifications as a rationale for choosing their children's schools.

Eventually, the parent choice issue may become a 14th amendment question of equal protection. Parents may claim the right to place thier children in any public school in a state, arguing that school district boundaries are capricious and discriminatory. This argument will be especially appeal-

ing to parents who have children in schools considered inferior (especially in inner city, rural, or low-expenditure areas).

In summary, numerous trends are keeping the parent choice issue alive in today's policy arena. Under such conditions, policymakers should be prepared to formulate appropriate responses to these demands.

Technology

Educational technology refers to the use of electronic tools to assist the teacher or to provide a way for students to learn independently. It includes such items as video discs and the electronic chalkboard. Advances in this area occur rapidly, and cost figures change monthly. The use of technology raises several questions:

- Wil technology replace teachers as providers of instruction?
- Will technology isolate children from human interaction?
- Will technology improve the quality of instruction?
- Is technology more cost effective than other methods of instruction?
- Is technological development occurring too rapidly for thoughtful assimilation?

Interest in technology is not new. We have a history of using tools in the instructional process: teaching machines, language laboratories, films, records, television, and computers. Recently, the microcomputer has had great influence on teachers, especially in the teaching of basic skills.

The recent literature shows a sharp division of opinion. Some writers argue that technology can have enormous positive influence on the education of both young and old. Others fear we are placing too much emphasis on computers and microelectronic technology. While some counsel against "technophobia," others caution us to avoid the faddism of computers. Both sides agree, however, that the electronic era is upon us and that we must master technology before it enslaves us.

In the future we will need to examine technological advances and their role in education. Policymakers are likely to be challenged by:

- Authoring systems—the ability to write programs without a knowledge of programming.
- Interactive, computerized video display—the merger of the video disc and the microcomputer to create powerful learning tools.
- Telecommunication with data bases—the ability to access national data bases that store an immense amount of information.

● Artificial intelligence/expert systems—frontier developments that may create computers that "think."

The use of technology in the schools is being driven by the private sector, parents, and teachers. Advocates promote technology as a solution to the problems of individualized instruction and as a way to make teaching more professional. Few believe it will replace teachers. Policymakers and educators should examine the potential of technology, see how it can best improve instruction, and control its use in schools through appropriate responses. In that manner, we will enhance its benefits and minimize its problems.

Schooling for Special Populations

The effect of the reforms on students is still to be determined, but early warning signs suggest a negative impact on students who are at risk. For these young people, school is often characterized by failure and frustration. The new achievement standards and curriculum requirements are likely to increase their frustration and the dropout rate. New policies will be necessary to address the needs of these vulnerable students.

Children between three and five years old are another special population coming into the spotlight. Changing social and economic conditions encourage reconsideration of early childhood programs—another instance of demands for new services. Proposals for policies include providing school for three- and four-year-olds and extending half-day kindergartens to full-day programs.

Dropouts

According to Dale Mann, "the United States cannot afford to wait for research results before doing something about our exorbitant dropout rate. Schools must focus immediately on the students they are most likely to lose—low income, white males enrolled in vocational programs" (1985, p. 16). Jordan-Davis (1984) reported that the average dropout rate from high schools is 26 percent and up to 50 percent in densely populated urban areas. In the Chicago Public Schools the dropout rate for the class of 1982 was 43 percent. "This means that, exclusive of transfer to other accredited high schools outside of the Chicago School System, 12,804 students, more than two out of five, left school before graduation" (Hess and Greer 1986, p. 3). Students' reasons for dropping out are varied. There is evidence that

social, personal, and school life are intricately interwoven, and that issues related to school often reflect failure and inadequate preparation. Most dropouts have significant problems with reading and writing (Jordan-Davis, 1984).

A particularly high proportion of dropouts are pregnant teenagers. "Women under twenty have over half a million births each year in the U.S. Among the 208,390 girls 17 and younger who gave birth in 1980, 89 percent had not completed high school. Even among the 353,940 mothers aged 18-19, 45 percent had not finished high school" (Moore 1983, p. 4). These startling statistics suggest major social costs for individuals and society. "A review of the research shows that the psychosocial characteristics of teenage mothers reflect low self-esteem, low aspiration, poor academic achievement, low status families and poor parent-child relationships" (Hoos, p. 10). With teenage pregnancy and the resulting increase in dropouts at epidemic levels, schools must increase their commitment to programs for these girls. "Public schools have the mission of educating all students to be productive and contributing members of the society. Without the skills to get and keep a job, as well as parenting skills, teenage pregnant mothers and their children get caught in a perpetuating life cycle" (Greene 1984, p. 3).

The policymakers' dilemma lies in knowing what to do. There are multiple associated problems, and solutions are difficult. However, the social costs are all too clear. Hess and Greer argue that "dropouts earn significantly less than high school graduates and pay significantly less in taxes. Dropouts are far more dependent on welfare and unemployment assistance, and much more likely to participate in criminal activity than high school graduates" (1986, p. 1). Maurer (1982) supports this view, suggesting that dropouts have increasingly high rates of behavioral problems, isolation from families, and unemployment. Whatever the potential outcomes, policy solutions must be developed to address these problems. Policy proposals may include:

- Comprehensive goal-directed special programs for at-risk students that incorporate both academic and vocational skills.
- Early intervention programs that focus on improving reading achievement before entering high school.
- Programs that reduce retention, thus enabling at-risk students to enter high school at earlier ages.
- Extensive inservice training for teachers who work with at-risk students.
- In-school child care and parenting services for teenage mothers.

- Special outreach and counseling programs for parents and guardians of at-risk students.

Children Between Three and Five Years Old

The expansion of publicly supported early childhood programs can be expected to gain the attention of policymakers. A number of factors are pressing officials and educators to provide these programs, factors including the socioeconomic conditions of urban, suburban, and rural districts; demographic profiles of student populations; enrollment projections; the amount of economic assistance from state and federal governments; and the employment of mothers of young children (Glazier 1985). There are concerns about an appropriate curriculum, transition classes, and intervention services almost at birth for handicapped children. However, two major issues now confront policymakers: (1) the possible extension of half-day kindergartens to full-day programs and (2) proposals to lower the school entrance age from five to four years.

Should half-day kindergartens be extended to full-day programs? Whatever the arguments, full-day programs are likely to begin in many communities within the next five years. Presently, 52 percent of mothers of children under six are employed. In addition, more than 50 percent of the nation's three- to five-year-olds are enrolled in some type of pre-kindergarten program that provides educational experiences (Schweinhart 1985).

Because many programs for young children are less than optimal the need for public programs is becoming apparent. Early childhood programs reflect a "hodgepodge" of tenuous arrangements (Kagan 1985). Troubling media reports depict problems with child care centers and child raising practices. Reports of inadequate facilities and fears of child abuse are compelling parents to look to public institutions.

Research findings with respect to the educational value of full-day kindergartens are inconclusive. Studies citing the disadvantages identify high per-pupil costs, increased demand for facilities, and the stresses of full-day programs on young children. Positive findings suggest that full-day programs increase learning time; provide greater opportunity for teachers to work with children; and enable children to experience enrichment in science, art, and music (Glazier 1985).

The challenge for policymakers is to consider the implications of the extended school day on curriculum, staffing, and resources. The developmental needs of young children should receive paramount consideration in

these matters. Kindergarten, as it presently exists, could be substantively restructured, and changes in the elementary grades should be anticipated as well. Glazier argues, "If kindergarten and pre-kindergarten programs are changed, then it stands to reason that the graded elementary school should be modified to accommodate the enriched skills of children graduating from these expanded programs" (1985, p. 17).

Should the school entrance age be lowered from five to four? In the 1960s, Head Start, a federal program for three- to five-year-olds, was designed to enable low-income children to achieve at priority levels with middle-class children. Studies of Head Start and other early interventions such as the Perry Preschool Project have shown that early educational experiences have a positive effect on children's achievement and cognitive development. Advocates for lowering the entrance age from five to four years usually base their arguments on these results. However, the success of disadvantaged children in early programs cannot be generalized to middle-class populations. Middle- and low-income children, according to Kagan (1985), did not gain equally from early intervention, and the benefits derived by disadvantaged children could not be generalized to whole populations. Caution about early programs is further suggested by the belief that pushing young children who are developmentally unready into school may have a negative effect on their entire school experience.

Policymakers will need to determine the effects of a lower entrance age on the costs and quality of programs. The policy dilemma will also focus on questions of spiraling down and compacting the curriculum rather than expanding one-year programs into two-year experiences. Because these factors are potentially in conflict, policymakers will no doubt proceed cautiously when considering the challenges of adjusting the school entrance age.

Education and Economic Development

Today, more and more people are linking economic development to quality education, believing that economic growth depends on good schools. Without better education, we will neither develop and attract new industries nor be competitive in the world market. This position has been forcefully stated by many state governors. We have rediscovered that "human capital" theory of education, which espouses the central thesis that the economic worth of people is increased to the extent that they receive an excellent education.

The belief that education is strongly related to economic development

has been with us a long time. From its beginnings, the United States has been committed to education as the basis for the economic well-being of individuals.

Although the link between education and economics is complex, impressive evidence brings together three strong relationships: (1) educational attainment and future income, (2) expenditure per pupil and lifetime income, and (3) educational investment and increase in the gross national product.

Policymakers will need information about the complex relationship between education and economic development, especially in a rapidly changing work environment, when we must compete with other advanced countries in the production of goods and services. Policy responses to this issue must be carefully crafted and thoughtfully enacted.

Conclusion

And so the next round is upon us. We are confident the state policy initiatives of the recent reform movement will require refinement and adjustment. We have highlighted emerging issues likely to capture attention soon. With this framework of reason to make sense out of the plethora of changes and proposals, we are empowered to enter the policy arena as leaders.

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